

1 CLAIMS

2 What is claimed is:

3  
4 Claim 1. A dynamic storage compartment adapted for  
5 insertion within and upon an interior panel of a vehicle door  
6 comprising:

7 a back panel member having a back surface, opposite sides,  
8 a top and a bottom, wherein said sides, top and bottom extend  
9 substantially perpendicular to said back surface;

10 a front panel member having a front surface, opposite  
11 sides, a top and a bottom, said front surface having an  
12 aperture therethrough;

13 a center member being constructed and arranged for  
14 mechanical engagement within and upon a surface of an inner  
15 panel of a vehicle door, said center member having opposite  
16 sides, a top and a bottom for connecting peripheral portions of  
17 said front and said back panel members so that said panel  
18 members face each other to form front and back inner boundaries  
19 of an interior portion of said storage compartment, wherein  
20 said sides, top and bottom of said back member are constructed  
21 and arranged to telescope inwardly and outwardly within said  
22 center member, wherein said storage compartment is at least  
23 partially recessed within an interior portion of said vehicle  
24 door; and

25 whereby attachment of said storage compartment to said

1 vehicle door provides enhanced interior storage for a vehicle.

2  
3 Claim 2. The storage compartment as set forth in claim 1,  
4 wherein said front panel member includes a covering means  
5 movable between a first open position and a second closed  
6 position, wherein said covering means is juxtaposed to said  
7 aperture while in said closed position.

8  
9 Claim 3. The storage compartment as set forth in claim 2,  
10 wherein said covering means includes a flexible flap, said  
11 flexible flap being connected to said front member for flexible  
12 movement between said open and said closed positions.

13  
14 Claim 4. The storage compartment as set forth in claim 2,  
15 wherein said covering means includes a rigid plate, said rigid  
16 plate being connected to said front member for pivotal movement  
17 between said open and said closed positions.

18  
19 Claim 5. The storage compartment as set forth in claim 2,  
20 wherein said covering means includes a plurality of narrow  
21 elongated rigid elements flexibly connected in an adjacent  
22 relationship, wherein at least one of said narrow elongated  
23 rigid elements is flexibly connected to said front panel  
24 member.

1           Claim 6. The storage compartment as set forth in claim 5,  
2   wherein said elongated rigid elements are constructed and  
3   arranged to form a plurality of accordion-like folds, wherein  
4   terminal a terminal fold is connected to said front panel  
5   member.

6

7           Claim 7. The storage compartment as set forth in claim 5,  
8   wherein said elongated rigid elements are constructed and  
9   arranged for winding around an axle in a series of concentric  
10   loops.

11

12           Claim 8. The storage compartment as set forth in claim 7,  
13   wherein said axle includes a spring retraction mechanism for  
14   retraction and deployment of said covering means.

15

16           Claim 9. The storage compartment as set forth in claim 2,  
17   wherein said covering means includes a flexible sheet element,  
18   said flexible sheet element being flexibly connected to said  
19   front panel member.

20

21           Claim 10. The storage compartment as set forth in claim 9,  
22   wherein said flexible sheet element includes a plurality of  
23   accordion-like folds.

24

25           Claim 11. The storage compartment as set forth in claim 9,

1 wherein said flexible sheet element is constructed and arranged  
2 for winding around an axle in a series of concentric loops.

3  
4 Claim 12. The storage compartment as set forth in claim  
5 11, wherein said axle includes a spring retraction mechanism  
6 for retraction and deployment of said covering means.

7  
8 Claim 13. The storage compartment as set forth in claim 1,  
9 wherein back panel member includes a means for pressing said  
10 back panel member outwardly of said center member and into said  
11 door cavity when a window in said vehicle door is moved in an  
12 upward direction.

13  
14 Claim 14. The storage compartment as set forth in claim  
15 13, wherein said means for pressing said back panel member  
16 outwardly includes at least one spring member.

17  
18 Claim 15. The storage compartment as set forth in claim 1,  
19 wherein said vehicle door window cooperates with said back  
20 panel member for pressing said back member into said center  
21 member during downward movement of said vehicle door window.

22  
23 Claim 16. The storage compartment as set forth in claim  
24 15, wherein said back member includes a ramping surface  
25 extending between said top and said back surfaces, wherein said

1     ramping surface is constructed and arranged to cooperate with  
2     a lower portion of said vehicle door window for pressing said  
3     back member into said center member during downward movement of  
4     said vehicle door window.

5  
6             Claim 17. The storage compartment as set forth in claim 1,  
7     wherein said sides, top and bottom extend substantially  
8     perpendicular to said front surface, wherein said front panel  
9     member is constructed and arranged to telescope inwardly and  
10    outwardly within said center member.

11  
12            Claim 18. A storage compartment adapted for insertion  
13    within and upon an interior panel of a vehicle door comprising:

14            a back panel member having a back surface, opposite sides,  
15    a top and a bottom, wherein said sides, top and bottom extend  
16    substantially perpendicular to said back surface;

17            a front panel member having a front surface, opposite  
18    sides, a top and a bottom, said front surface having an  
19    aperture therethrough;

20            a center member being constructed and arranged for  
21    mechanical engagement within and upon a surface of an inner  
22    panel of a vehicle door, said center member having opposite  
23    sides, a top and a bottom for connecting peripheral portions of  
24    said front and said back panel members so that said panel  
25    members face each other to form front and back inner boundaries

1 of an interior portion of said storage compartment, wherein  
2 said sides, top and bottom of said back member are constructed  
3 and arranged to telescope inwardly and outwardly within said  
4 center member, wherein said storage compartment is at least  
5 partially recessed within an interior portion of said vehicle  
6 door;

7 a flexible covering element secured to said front panel  
8 member and movable between a first open position and a second  
9 closed position, wherein said covering element is juxtaposed to  
10 said aperture while in said closed position;

11 wherein said vehicle door includes a window, wherein said  
12 window cooperates with said back panel member for pressing said  
13 back member into said center member during downward movement of  
14 said vehicle door window, wherein an item stored in said  
15 interior portion of said storage compartment may flex said  
16 front panel member into an interior portion of said vehicle.

17

18 Claim 19. A dynamic storage compartment adapted for  
19 insertion within and upon an interior panel of a vehicle door  
20 comprising:

21 a back panel member having a back surface, opposite sides,  
22 a top and a bottom, wherein said sides, top and bottom extend  
23 substantially perpendicular to said back surface;

24 a front panel member having a front surface including a  
25 plurality of pleated folds, opposite sides, a top and a hinged

1 bottom, said top surface having an aperture therethrough;

2 a center member being constructed and arranged for  
3 mechanical engagement within and upon a surface of an inner  
4 panel of a vehicle door, said center member having opposite  
5 sides, a top and a bottom for connecting peripheral portions of  
6 said front and said back panel members so that said panel  
7 members face each other to form front and back inner boundaries  
8 of an interior portion of said storage compartment, wherein  
9 said sides, top and bottom of said back member are constructed  
10 and arranged to telescope inwardly and outwardly within said  
11 center member, wherein said storage compartment is at least  
12 partially recessed within an interior portion of said vehicle  
13 door;

14 a lid member hingedly secured to said front panel member  
15 and movable between a first open position and a second closed  
16 position, wherein said covering element is juxtaposed to said  
17 aperture while in said closed position, wherein said lid member  
18 includes a keyhole aperture, said keyhole aperture constructed  
19 and arranged to cooperate with said front panel member in a  
20 latched position and an unlatched position, wherein said latched  
21 position holds said front panel member against said door panel  
22 and said unlatched position allows said front panel member to  
23 expand inwardly into an interior area within said vehicle,  
24 thereby increasing storage space within said storage  
25 compartment;

1        wherein said vehicle door includes a window, wherein said  
2 window cooperates with said back panel member for pressing said  
3 back member into said center member during downward movement of  
4 said vehicle door window, wherein an item stored in said  
5 interior portion of said storage compartment may flex said  
6 front panel member into an interior portion of said vehicle  
7 when said keyhole aperture is in said unlatched position.

8  
9        Claim 20. A dynamic storage compartment adapted for  
10 insertion within and upon an interior panel of a vehicle door  
11 comprising:

12        a back panel member having a back surface, opposite sides,  
13 a top and a bottom, wherein said sides, top and bottom extend  
14 substantially perpendicular to said back surface;

15        a front panel member having a front surface, opposite  
16 sides, a top and a bottom, said front surface having an  
17 aperture therethrough, said sides, top and bottom extending  
18 substantially perpendicular to said front surface, wherein said  
19 front panel member is constructed and arranged to telescope  
20 inwardly and outwardly within said center member;

21        a center member being constructed and arranged for  
22 mechanical engagement within and upon a surface of an inner  
23 panel of a vehicle door, said center member having opposite  
24 sides, a top and a bottom for connecting peripheral portions of  
25 said front and said back panel members so that said panel



1 members face each other to form front and back inner boundaries  
2 of an interior portion of said storage compartment, wherein  
3 said sides, top and bottom of said back panel member and said  
4 front panel member are constructed and arranged to telescope  
5 inwardly and outwardly within said center member, wherein said  
6 storage compartment is at least partially recessed within an  
7 interior portion of said vehicle door;

8 a rigid covering element secured to said front panel  
9 member and movable between a first open position and a second  
10 closed position, wherein said covering element is juxtaposed to  
11 said aperture while in said closed position;

12 wherein said vehicle door includes a window, wherein said  
13 window cooperates with said back panel member for pressing said  
14 back member into said center member during downward movement of  
15 said vehicle door window, wherein said back panel member  
16 cooperates with said front panel member to press said press  
17 said front panel member into an interior portion of said  
18 vehicle.